2. Purpose and need of proposed action. Include description of existing facilities, abutting facilities, and how the action links into the overall transportation system. When appropriate, show that commitment for future work is not being made without evaluation, and that viable alternatives in a larger framework are not being unduly foreclosed.

The purpose of the project is to provide a cost-effective, functional, reliable transportation link across the Fox River, between the east and west sides of the City of De Pere. The link will serve vehicular, bicycle and pedestrian traffic, in addition to meeting the needs of the commercial and recreational marine traffic on the Fox River.

Project Background

The Claude Allouez Bridge, as with all state and local bridges, is inspected and evaluated on a regular basis. The result of the inspection and evaluation is the assignment of a Sufficiency Rating (SR) for the bridge. The SR represents the structural condition and functionality of the bridge. If a bridge has an SR below 50, it is determined that the bridge is in poor enough condition, taking all factors into consideration, for complete replacement.

The Claude Allouez Bridge (Structure B-5-734) is a two-lane bascule bridge, built in 1932. The Claude Allouez Bridge is comprised of four structural units, totaling 21 spans with an overall length of 1909 feet. Unit 1 is comprised of a 5-span steel deck girder. The overall length is approximately 405 feet. The Sufficiency Rating (SR) for this unit is 28.2. Unit 2 is an 11-span steel deck truss. The overall length is approximately 1155 feet. The SR for this unit is 28.5. Unit 3 is a rolling lift type steel bascule span with a centerline-to-centerline bearing length of 98 feet and an overall length of approximately 127 feet. The clear channel width is approximately 85 feet. The SR for this unit is 28.5. Unit 4 is a 4-span reinforced concrete cast-in-place deck girder. The overall length is approximately 222 feet. The SR for this unit is 46.5. All Sufficiency Ratings are based on a March 13, 2002 inspection by the Wisconsin Department of Transportation (WisDOT).

A ***Claude Allouez Bridge Condition Report, completed in 1998*** (Appendix A), recommended total bridge replacement. The report noted that the Claude Allouez Bridge is approaching and may be beyond its effective life. Continued expenditure of public funds would be required to maintain its serviceability. Due to the deteriorated condition, the report noted that the effectiveness of any repair or rehabilitation would be suspect to future failure or additional repair. The report further noted that, using sound engineering judgment and life cycle costing techniques, structure replacement is the preferred recommendation to provide a maintenance free facility with an extended service life to meet the future traffic needs of the local area.

In February of 2002, a ***Bridge Rehabilitation Study*** (Appendix B) was completed. The purpose of the study was to identify the specific repairs that would be needed to extend the life of the structure for an additional 20 years. In other words, the study was intended to provide better information regarding the evaluation of the "No Build" alternative. The study was completed utilizing information documented in the Structure Condition Report along with past and current bridge inspection reports. The basic concern with bridge rehabilitation as an acceptable alternative is that the bridge would need to be closed for a period of 9 to 16 months during rehabilitation activities. This is totally unacceptable to the De Pere community due to the potential economic impacts on the businesses in the community as a result of long-term bridge closure. A secondary issue involved the financial justification of spending an estimated $4.6 million for a relatively short-term fix of the bridge, when ultimately the bridge would need to be replaced.

The Claude Allouez Bridge has been operated as a bascule bridge since 1932. This operation was in conjunction with the Fox River lock and dam facilities (Fox River Navigation System) between the City of De Pere and Lake Winnebago (Lower Fox River). After the 1987 boating season, thru-navigation ceased on the Fox River between De Pere and Lake Winnebago due to the implementation of lamprey control efforts on the Lower Fox River ***(East Central Regional Planning Commission Correspondence, dated May 23, 1995)*** (Appendix C). In the 1990's, as a result of the elimination of navigation on this stretch of the Fox River, the Lawe Street Bridge (STH 55), City of Kaukauna, Outagamie County and the Fox River Bridge (STH 96), Village of Wrightstown, Brown County were no longer operated as bascule bridges. In 1997, the Lawe Street Bridge was replaced with a fixed span bridge. In 1999, the Fox River Bridge in the Village of Wrightstown was structurally modified to eliminate the bascule operation of the bridge. In order

to satisfy the requirements of the local recreational boating users and some limited commercial use, a 23-foot clearance standard was set for all fixed span bridges on the Lower Fox River ***(Fox River Management Commission Correspondence, dated March 25, 1998)*** (Appendix D). The Claude Allouez Bridge, in conformity with the decisions previously made concerning the navigation uses of the Lower Fox River, will be discontinued as a bascule bridge. The current bridge profile will result in a 24 to 25 foot vertical clearance from the 100-year flood level of the river. The additional clearance is intended to satisfy a special requirement for a local cruise vessel.

In the case of all of the proposed alternatives, the new structure(s) will cross over an existing railroad corridor running adjacent to the east shoreline of the Fox River. The rail had been previously operated by the Wisconsin Central Limited Railroad, but has been abandoned. The corridor has since been placed in the "Rails to Trails" Program managed by the Wisconsin Department of Natural Resources. The corridor is currently being used as a recreational trail. The trail is the most popular trail in the Brown County area with 266,790-recorded users in 2002. The "Rails to Trails" Program converts abandoned railroad corridors into recreational trails, . The program does not preclude the corridor from being converted back to railroad use at some future date. As a result, any new structure placed over the corridor should be constructed with the potential for a future active rail in mind. This generally means the structure should be constructed with a 21 foot (minimum) to 23-foot (desirable) vertical clearance to a future rail. The proposed structure will be designed to meet this vertical clearance requirement. Minimizing this vertical clearance will be desirable in order to minimize the east approach roadway grades to the bridge. The project will be designed with a plan to allow for a combination of structure modifications and the re-grading of the trail to accomplish future vertical clearance requirements.

A second need of the proposed project is to reduce the traffic congestion in downtown De Pere. In 1996, the ***Land Use and Transportation Plan*** (Appendix E) completed by the Brown County Planning Commission (BCPC), the Metropolitan Planning Organization for the Green Bay Metropolitan Area, noted that growth of the Green Bay metropolitan area on both the east and west sides of the Fox River will place an ever increasing traffic pressure on the area's six existing bridges over the river, especially the Claude Allouez bridge located in downtown De Pere and the STH 172 bridge located approximately two miles to the north. Based on a Level of Service "D", the County Plan listed the existing capacity of the bridge at 24,000 vehicles per day (vpd). The 1995 traffic volume, measured by WisDOT, was 23,000 vpd. The 2001 count increased to 25,500 vpd, which is somewhat lower than the 1998 count of 26,400 vpd. In the 1996 Plan, the BCPC projected a 36% increase in traffic on the bridge by 2020 to approximately 32,100 vpd. The Plan noted that the increase, while significant, was somewhat limited by the capacity of the bridge. The issue of east-west traffic movement in the Green Bay metropolitan area has been discussed for several years. To alleviate the anticipated future traffic congestion, the BCPC Plan recommended the construction of an additional bridge south of the City of De Pere. The Plan further noted that the new southern bridge (Exhibit 31)should be considered a separate project to any improvements made to the Claude Allouez Bridge and would probably not be needed until 2020. The Plan recommended that the Claude Allouez Bridge be widened to four lanes and that this improvement should be completed prior to the construction of a new southern crossing. While the additional bridge south of the City of De Pere is not anticipated to reduce traffic volumes on the Claude Allouez Bridge, it is intended to help slow the traffic volume increase on the Claude Allouez Bridge in future years. The BCPC predicts that a majority of the traffic projected to use the bridge south of the City of De Pere would come from future area development south of the City of De Pere. Without the bridge south of the City of De Pere, traffic volumes on the Claude Allouez Bridge are projected to climb over 40,000 vpd.

Alternative Identification

In 1998, the ***Claude Allouez Bridge Location Study*** (Appendix F) was completed for the project. The Location Study included an analysis of the traffic flow on the approaches to the bridge. In conjunction with the study, a City of De Pere Ad Hoc Planning Committee was formed. The Ad Hoc Committee acted as facilitators for public involvement and as an advisory group to the City.

The Ad Hoc Committee developed the following overall purpose statement:

> "The purpose of the Claude Allouez Bridge Improvement Ad Hoc Planning Committee is to develop proposals for the Main Avenue/George Street corridor to provide satisfactory traffic flow for the next 25 years, while maintaining the current character of downtown De Pere."

The Committee also developed a set of goals, which they subsequently used to evaluate the alternative bridge alignments developed in the Location Study. The goals were:

1. Reduce congestion at the Broadway and George Street intersection
2. Minimize the impact of traffic on school campuses in the vicinity of the downtown area.
3. Maintain traffic circulation during construction.
4. Improve circulation (traffic) on George Street.
5. Maintain the existing level of parking in the downtown area.
6. Develop a public education process regarding transportation issues.
7. Encourage transportation demand management to reduce congestion and accommodate alternative transportation modes including bikes, buses, pedestrian, and car pools.
8. Incorporate aesthetic features into transportation improvements consistent with the theme adopted in the downtown area.
9. Seek short-term incremental improvements for traffic flow.
10. Establish a reasonable level of service to provide for smooth flow of traffic during most hours without over-designing to accommodate peak flow (That level of service is defined to be level of service "D" during the peak hour as adopted by the Brown County Transportation Plan.)

The Ad Hoc Planning Committee identified six build alternatives and one no-build alternative.

Two-Bridge Alternative (Alternative 1) - Construction of a new bridge next to the existing bridge and rehabilitation of the existing bridge. Each bridge would be two lanes and one-way.

Two-Bridge Alternative (Alternative 2) - Construction of a new bridge between Reid Street and Chicago Street and rehabilitation of the existing bridge. Each bridge would be two lanes and one-way.

Two-Bridge Alternative (Alternative 3) - Construction of two separate two-lane bridges carrying traffic in each direction.

Single Bridge Alternative (Alternative 4) - Construction of a new four-lane bridge on a new alignment, upstream of the De Pere dam.

Single Bridge Alternative (Alternative 5) - Construction of a new four-lane bridge on a new alignment, upstream of the De Pere dam. Make George Street and Charles Street one-way traffic.

Single Bridge Alternative (Alternative 6) - Construction of a new four-lane bridge on the existing bridge alignment.

No build Alternative (Alternative 7) - Rehabilitation of the existing two-lane bridge.

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